



GOLD COAST COLONY

REPORT

ON THE

Medical Department

FOR THE YEAR

1941

GOLD COAST

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Annual Medical Report for the Year 1941

I.—PUBLIC HEALTH

(I) SUMMARY OF IMPORTANT EVENTS

The outstanding event of the year was an extensive outbreak of smallpox. The area involved was considerable, but cases occurred sporadically, and there was no tendency for the outbreak to assume epidemic proportions in any locality. The areas involved were the Central Province of the Colony and the Northern Territories. Three hundred and forty-three cases occurred in the Central Province, of which 106 died. In the Northern Territories 1,127 cases were reported with 66 deaths. The degree of virulence of the two infections was different, and the discrepancy between the mortality rates in the two areas is worthy of note, i.e., 31·0 and 5·8 per cent., respectively.

2. Twenty-five cases, only, of cerebro-spinal meningitis were reported. Three of these cases occurred in Ashanti (Kumasi) and the rest in the Northern Territories. Eleven of these cases proved fatal.

3. The enquiry into the prevalence of tuberculosis and silicosis in mine labourers employed in the Tarkwa district of the Colony was continued ; the number of labourers examined being brought to a total of 776. Some scarcity of X-Ray films, and the absence on leave of one of the specially qualified medical officers engaged in the investigation slowed down the rate of progress. As reported last year, it is now definitely established that conditions in certain of the Gold Coast mines are capable of producing silicotic lesions. Dr. J. A. Crocket, during his leave in South Africa, attended a course at the Miners Phthisis Bureau. The experience thus gained by Dr. Crocket should prove of high value to the Gold Coast in the future. Of the three recommendations made by Dr. Murray and Dr. Crocket in their report, the second, i.e., that tuberculosis should be made notifiable, comes into force on 1st March, 1942. It is unlikely, however, that the statistics obtained will be of very great value for some years to come. Means for the adoption of the first and third recommendations, i.e., the compulsory registration of all mine labour, and the recording of dust counts and underground atmospheric conditions, are being sought. The registration of mine labour presents many difficulties in a country where the labourers are not compounded, and where the practice of several labourers working on a single ' ticket ' is not uncommon.

A supernumerary medical officer of health will be appointed next financial year and, on the assumption of duty of this officer, Dr. Crocket will be liberated from his routine duties, and will be able to devote his whole time to the prosecution of the inquiry into the general question of pulmonary tuberculosis in the Gold Coast.

4. A report on the dietary and nutrition of the peoples of the Gold Coast became available during the year. It is considered, however, that the report is not yet in a form suitable for general publication. Briefly, the report in question makes it clear that there is little wrong with the dietary of the coast African. In the forest zone, the diet does not lack in energy value, but there is some deficiency in good quality protein. The suggestion is made that this can be remedied by stimulating local, small, live-stock raising. Culinary methods, in this area, are reported as being very primitive and capable of much improvement. In the Northern Territories a considerable amount requires to be done. More staple food crops should be grown ; all the necessary foods are available, or can be cultivated locally ; red palm oil requires to be popularised ; and certain reserve crops, e.g., rice, should be grown to tide over the period when food shortage, in certain areas, borders on a condition of famine. Local overcrowding is apparently, a factor of importance, as are, also, trypanosomiasis and onchocerciasis.

The collaboration of the Chemical Laboratory with the Prison Department in a survey of the methods of curing and preserving local fish, and in endeavouring to assess the importance of the industry to the country was continued and considerably extended during the year.

5. Extensions to the European Hospital, Accra, and to the African Hospital at Kumasi were completed during the year. The extension to the European Hospital, Accra, accommodates a maximum of twelve beds ; and that to the African Hospital, Kumasi, sixty-four beds. The new extension ward at the African Hospital, Tarkwa, was almost completed during the year. This extension will, finally, accommodate twelve beds.

The Colonial Asylum, Accra, was considerably improved by the provision of a new administrative block, comprising offices for the Alienist, his clerks, and a suitable store and dispensary. This addition made it possible to extend the kitchen to include the old administrative block, and to provide a larger pantry.

6. The general death rate for the registration areas rose from 22·2 per 1,000 persons living in 1940 to 23·8 for the year under review. It must be remembered, however, that there has been a considerable influx of population into the registration areas for industrial and other reasons. There was, also, a rise in the maternal mortality rate. The infantile mortality rate remained stationary at 110. This is a factor of considerable importance. There was a rise in the still birth rate. The pulmonary tuberculosis rate, per 1,000 deaths registered, also rose. The deaths due to general diseases of the respiratory tract and intestinal diseases, per 1,000 deaths registered, both fell. The total number of deaths due to starvation rose by 15 over the total for 1940. (For further details see paragraphs 41 to 43.)

7. It is very difficult to comment on the invaliding figures of European officials. There is now no standard tour, and it is not possible to find a basis of fair comparison with previous years for up to, and including, 1940, military invalidings and deaths were included with the civilian figures. It can only be stated that 14 European officials were invalided by a medical board or on medical certificate before the completion of an eighteen months tour. Five European officials died during the year.

8. During the year there were fifty non-official European invalidings and sixteen deaths. A juster comparison between the years 1940 and 1941, it is thought, can be obtained if the total European figures, both official and non-official, are taken together. In 1941, the total resident was 3,729 as compared with 4,287 in 1940, i.e., a decrease of 558. This decrease is due to the non-inclusion of military figures and the opening-up of leave. The number of invalidings fell from 116 in 1940 to 64 in 1941. The decrease in the number of invalidings is probably due mainly to the increased incidence of leave. The total number of deaths fell from 22 in 1940 to 21 in 1941. Of this total 10 deaths occurred in Europeans engaged in the mining industry. This section of the community (totalling 1,280) suffered 24 invalidings. In 1941, therefore, the invaliding rate fell from 2·7 per cent to 1·7 per cent, and the death rate rose from 0·5 per cent in 1940 to 0·6 per cent in 1941.

9. Twenty-six African officials were invalided during the year, and 19 died. The corresponding figures for 1940 were 23 and 18, respectively. The figures for the two years correspond very closely, and little significance can be drawn from them.

10. From the facts known it must be inferred that there was no very marked deterioration in the health of the general public. If any section of the community showed the effects of wartime strain, it is, perhaps, the European mining community.

11. Owing to the wartime depletion of medical staff four temporary medical officers, of whom two were African, were employed by the Medical Department. Many calls, also, had to be made on private ladies, possessing State Registered nursing qualifications, to replace casualties in the Colonial Nursing Service on which a heavy burden has been thrown. These temporary nursing sisters served for periods varying from a week, or two, up to nine months. It is difficult to know how the Department could have functioned properly without this outside aid.

12. In spite of depleted European and African staffs, there was a greatly increased volume of work carried out during the year. The number of in-patients treated rose by 4,332, and the out-patients attending the various hospitals and dispensaries increased by 48,011 over the figures for the previous year. The rise in the number of female out-patients was chiefly due to a considerable increase in the number of ante-natal cases. This increase, a promising feature under existing conditions, was not only noticeable in the larger centres, but also in out-stations where midwives subsidised by Government are in practice. The midwives held weekly ante-natal clinics at the local hospitals under the supervision of the medical officer. The rise in the number of male out-patients was chiefly due to increases in the number of minor accidents in mines and quarries, etc., and accidents resulting from the handling of tools and machinery. Yaws was responsible for increases in the number of male and female out-patients of 8,095 and 1,739, respectively. The increase in the number of in-patients is distinctly referable to those hospitals serving centres to which population has recently been attracted by industrial, or other, causes. The diseases chiefly responsible for the increased number of in-patients are malaria (increase of 1,015 in cases treated); smallpox; pulmonary tuberculosis gonorrhoea and its complications; diseases of the nervous system; bronchitis; lobar pneumonia; hernia and intestinal obstruction; other diseases of the digestive system; diseases of the skin, etc., malformations and diseases of early infancy; and external causes (other forms of violence).

13. Notwithstanding staff, equipment and supply difficulties it is thought that it can safely be said that there has been little, or no, curtailment of the public service. Seven hospitals are without medical officers, but full dispensary facilities have been retained at these places, and they are visited by a medical officer as frequently as possible.

(II) IMPORTANT DISEASES TREATED DURING THE YEAR

Diseases of the enteric group (1).

14. Two hundred and five cases of diseases of the enteric group with 27 deaths were treated, compared with 185 cases and 22 deaths in 1940. Diseases of the enteric group are much commoner than these figures would indicate.

Small-pox (5)

15. A total of 251 cases with 28 deaths were treated during the year. In 1940, no case of small-pox was treated in the hospitals. It will be appreciated that most of the 1,470 cases reported were treated in bush hospitals of temporary construction.

Diseases of the dysenteric group (12).

16. Some 1,595 cases with 44 deaths were treated, compared with 1,766 cases and 49 deaths in 1940. Of these cases, 49·7 per cent were of the amoebic variety. The total cases of dysentery treated represented 0·4 per cent of all cases seen. The percentage of fatal cases to the total cases of dysentery treated was 2·8 per cent.

Cerebro-spinal fever (16).

17. Twenty-six cases of cerebro-spinal fever were treated with 11 deaths, compared with 79 cases and 21 deaths in 1940.

Rabies (17).

18. Nine cases of rabies with three deaths were treated. In 1940, seven cases with one death were reported. As in previous years, the chief means of prevention is through the control of the dog population. Diseased and masterless dogs were destroyed, and the rest were protected by inoculation. It will be appreciated, however, that vast areas of the country cannot be controlled and that the numbers of pariah dogs are legion.

Tetanus (18).

19. Tetanus was responsible for 189 cases with 25 deaths compared with a total of 127 cases and 33 deaths in 1940. In connection with such diseases as tetanus and rabies, it will be appreciated that relatives, or friends, are very apt to remove a patient from hospital when the case is apparently hopeless.

Tuberculosis of the respiratory system (19).

20. Tuberculosis of the respiratory system was responsible for the largest number of deaths occurring in hospital during the year, i.e., 285, or 12·1 per cent of all deaths. In the registration areas of the Gold Coast pulmonary tuberculosis accounted for 11·0 per hundred registered deaths.

In all 1,814 cases were treated, or 0·5 per cent of all cases seen and treated in hospitals and dispensaries. Of these 1,814 cases 70 per cent were males. The African, in general, has little, or no, resistance to the infection, but in the older centres of the Gold Coast it is believed that tuberculisation is not uncommon and that a certain degree of resistance has been, and is being, acquired.

The person chiefly affected is the itinerant labourer who may often be an immigrant. The universal spitting habit, overcrowding, exposure, an ill-balanced diet and often an inadequate one, ignorance of the first laws of self protection against the infection, and concurrent debilitating disease, all play their part in the spread of a disease that may well prove the major health problem of the future. Unlike some other diseases, for example yellow fever and trypanosomiasis, pulmonary tuberculosis is not a well advertised disease and has not yet aroused the public interest and concern it deserves.

Other tuberculous diseases (20).

21. Other tuberculous diseases accounted for 279 cases with 18 deaths, or 13·3 per cent of cases due to all forms of tuberculosis.

Leprosy (21)

22. Some 687 cases of leprosy were treated as in-patients, and 489 as out-patients during the year, compared with 622 and 517, respectively, in 1940. Leper settlements exist at Ho, Accra, Kumasi, Yendi and Sekondi. The only settlement of any size is that at Ho where 423 inmates were under treatment during the year. Of these inmates, the disease was arrested in 28 cases, and in 174 cases improvement was obtained.

Venereal diseases (22).

23. Seven hundred and seventy cases of syphilis were treated with 19 deaths, compared with 698 cases and 15 deaths in 1940. Gonorrhœa, and its complications and sequelæ, are extremely common. Seven thousand three hundred and thirty-one cases were treated with 19 deaths, compared with 7,374 cases and 20 deaths in 1940. These figures give but little indication of the general prevalence of the disease.

Yellow fever (23).

24. Four cases, all African males, were treated during the year. They all proved fatal. In 1940, no cases were treated in hospitals, but two fatal, sporadic cases were reported. A supply of attenuated virus vaccine was available throughout the year, but a good deal of trouble was experienced in providing suitable storage accommodation for it. As a result of past experience, however, there should be little difficulty in the future. Arrangements are being made to provide facilities for the local estimation of the viability of virus vaccine.

Malaria (24).

25. Malaria is universal. Some 38,209 cases were treated during the year, compared with 31,921 in 1940. Eighty-two deaths were reported, or 3·5 per cent of the total deaths recorded in hospitals. In the registration areas malaria was responsible for 7·9 deaths per hundred registered deaths. The subtertian parasite was responsible for 51·8 per cent of the total cases treated. In 1940, the percentage was 53·9. Quinine continues to be available at all post offices, but the price has had to be raised from 7d to 8d per tube of 15 four grain tablets. In the Northern Territories quinine is distributed by the Native Administrations at the former price of 1d per tube.

Blackwater fever (25).

26. Eighty cases with eight deaths were treated, compared with 62 cases and seven deaths in 1940. The total cases treated represent 0·4 per cent of all recorded cases of subtertian malaria.

Trypanosomiasis (27).

27. Trypanosomiasis was responsible for 172 deaths during the year, or 7·3 per cent of the total deaths recorded. This percentage places trypanosomiasis, as a killing disease, third only to pulmonary tuberculosis and diseases of early infancy. It is not necessary, therefore, to stress the importance of this disease. The total number of cases of trypanosomiasis treated was 4,322 compared with 5,676 in 1940, i.e., a decrease of 1,354 cases. The stations recording the highest increases were :—Kumasi, Bekwai, Yendi, Gambaga and Navrongo. Extensive surveys were carried out in Northern Ashanti, in the Kumasi district, and in the Lawra district of the Northern Territories including the Kamba Valley area which was surveyed twice. The first survey of the Kamba area revealed a considerable decrease in the incidence of cases found in previous years. In the second survey in 51 villages examined further decreases were found in 29, 14 yielded the same rate in both surveys, and for seven an increased rate was returned. The second survey has not yet been fully completed. The selective clearing part of the Kamba clearing and re-settlement scheme progressed actively during the dry season, but was not quite fully completed. Sixty-seven miles of riverine bush have now been cleared. The Medical Entomologist reports that fly reduction in the central reaches of the river is almost complete. *Glossina palpalis* has virtually been eliminated, and the catches of *Glossina tachinoides* reduced to one to two flies per week. Previous to clearing, the fly catching team of four boys caught from 300 to 500 of both species per week. Some movement towards resettlement has, also, been reported. The future of this experimental scheme will be watched with much interest. Some apprehension was felt during the year concerning the part played by *Glossina submorsitans* in the transmission of human trypanosomiasis under natural conditions in the Gold Coast. The question still calls for clarification.

Yaws (28).

28. The total number of cases of yaws treated during the year was 78,819, compared with 68,986 in 1940. This yields an increase of 9,833 cases. Most of this increase is referable to one station which has recently become linked-up with the main road system of the country, thereby facilitating attendance for treatment.

Helminthic diseases (30, 31 and 32).

29. Some 7,535 cases of helminthic infestation were treated during the year with 25 deaths, compared with 8, 004 cases and 15 deaths in 1940. Ankylostomiasis was responsible for 923 cases with 16 deaths. This infestation is much commoner than these figures indicate, but the typical clinical picture is not often seen.

Schistosomiasis, a commoner infestation than usually supposed, accounted for 1,002 cases with six deaths.

Cancer and other tumours (34).

30. Malignant tumours were responsible for 88 cases with 12 deaths ; and non-malignant tumours for 861 cases with nine deaths.

Rheumatic conditions (35).

31. Of the 6,264 cases of rheumatic conditions reported many were, probably, of gonococcal and frambœsic origin.

Scurvy (37).

32. Seventeen cases of scurvy, with no death, were recorded during the year.

Beri-beri (38).

33. Twenty cases of beri-beri, with one death, were reported.

Pellagra (39).

34. Thirty-one cases of pellagra were treated with six deaths.

Other nutritional diseases (40*a*).

35. Avitaminosis, often multiple, accounted for a total of 422 cases with eight deaths.

Trachoma (45).

36. The seventy-two cases of trachoma reported is considered not to represent a true picture of the incidence of this disease.

Affections of the respiratory system (bronchitis and pneumonias 49, 50 and 51).

37. Bronchitis accounted for 13,998 cases with ten deaths ; broncho-pneumonia for 544 cases with 54 deaths ; lobar pneumonia for 900 cases with 58 deaths ; and “ undefined ” pneumonia for 346 cases with 16 deaths. In all, bronchitis and the pneumonias accounted for a total of 15,788 cases with 138 deaths, or approximately 4 per cent of all cases treated and 6 per cent of the total number of deaths. In 1935, the deaths resulting from diseases of this category accounted for 13·6 per cent of the total deaths. Modern methods of treatment have considerably altered the picture presented by this disease group in the last few years.

Nephritis all forms (58).

38. In a country where yellow fever is endemic the importance of nephritis becomes considerably increased. During the year, 657 cases were treated with 65 deaths, compared with 692 and 56, respectively, in 1940.

Pregnancy, child birth, etc. (60).

39. Notice has been drawn earlier in this report to the considerable increase in the number of cases seen, in 1941, i.e., 45,338, compared with 28,311 in 1940 ; an increase of 17,027. This increase was mainly due to the very material rise in the number of women attending for ante-natal care.

As to be expected, therefore, the total number of deaths recorded under this head (143), has not risen proportionately to the number of deaths reported in 1940, i.e, 126.

External causes (64*b*).

40. Attention has, also, previously been called to the considerable increase under this sub-head over the total recorded for 1940, i.e., 14,264. This increase is mainly due to an increase of 13,385 male out-patients chiefly suffering from minor injuries as a result of working in mines and quarries and to the handling of machinery and tools. It will be appreciated that opportunities for such employment have recently increased considerably.

(III) VITAL STATISTICS

(I) GENERAL POPULATION

41. The numerous tables, usually extracted from the Annual Report and Summary of the Principal Registrar of Births, Deaths and Burials, have been omitted from this report. The consolidated figures in the following table, however, are of considerable interest :—

TABLE I

	1941	
		Total number registered
Total estimated (mid-year)	3,962,692	
Estimated population of registration areas	355,780	—
Birth-rate (weighted average) per 1,000 persons living	35·5	12,627
Death-rate (weighted average) per 1,000 persons living	23·8	8,467
Infantile mortality-rate	110	1,388
Still birth-rate per 1,000 total births	54	685
Maternal mortality-rate per 1,000 total births	16·4	218
Deaths from respiratory diseases (general) per 1,000 deaths registered	129	1,091
Deaths from pulmonary tuberculosis per 1,000 deaths registered	110	935
Deaths from intestinal diseases per 1,000 deaths registered	84	710
Deaths from malaria per 1,000 deaths registered	79	665
Deaths due to starvation	—	35

The birth rate fell from 38·1 in 1940 to 35·5 1941. The death rate rose from 22·2 in 1940 to 23·8 in 1941. The infantile mortality rate remained stationary at 110. The still birth rate rose from 48 in 1940 to 54 in 1941. The maternal mortality rate rose from 11·1 to 16·4. The deaths from respiratory diseases fell from 145 to 129 per 1,000 deaths registered. Deaths from pulmonary tuberculosis rose from 100 to 110 per 1,000 deaths registered. Deaths from intestinal diseases fell from 95 to 84 per 1,000 deaths registered. Deaths due to malaria rose from 78 to 79 per 1,000 deaths registered. The number of deaths resulting from starvation increased from a total of 20 in 1940 to 35 in 1941.

II GENERAL EUROPEAN POPULATION

42. The following table gives particulars for the European population for the year :—

TABLE II

								Official	Non-official	Total
Number of Europeans resident	...	...	...	...	...	...	...	882	2,847	3,729
Number invalided	...	...	...	...	...	...	...	14	50	64
Number of deaths	...	...	...	...	...	...	...	5	16	21

The total number of Europeans resident, both official and non-official, fell from 4,287 in 1940 to 3,729 in 1941 i.e., by 558. In 1941, however, military figures were not included, and the more general opening up of leave, also, assisted in producing the lower total. Invalidings fell from 116 in 1940 to 64 in 1941. Here again, the more general incidence of leave must have had a lowering effect. The total number of deaths in 1941 fell from 22 to 21. The causes of the invaliding of European officials were—bronchitis and emphysema ; bronchitis and obsessional neurosis ; malaria (2) ; pulmonary tuberculosis ; cholecystitis ; debility (3) ; diverticulitis ; insomnia (2) ; anæmia ; and oxaluria. The causes of the deaths of European officials were blackwater fever 1 : coronary thrombosis 2 ; malaria 1 ; endocarditis 1.

The chief causes of the invaliding of non-officials were—pulmonary tuberculosis (4) ; neurasthenia, etc., (4) ; fibrosis of lungs (3) ; asthma (3) ; malaria (3) ; anæmia (3) ; duodenal ulcer (2) ; bronchitis (2) ; debility (2) ; appendicitis (2). The causes of deaths of non-officials were—blackwater fever (5) ; cancer (2) ; polyneuritis ; diabetes ; splenic anæmia ; meningitis ; myocarditis ; motor accident ; malaria ; hemiplegia ; and cerebral thrombosis.

III.—OFFICIAL AFRICAN POPULATION

TABLE III

Number resident	Number invalided	Number of deaths
4,576	26	19

43. The principal causes for the invalidings of African officials were—diseases of the heart and circulatory system 5, or 19·2 per cent ; and tuberculosis 3 (2 pulmonary) or 11·5 per cent.

Of the causes of deaths of African officials the principal were—cardiac conditions 6, or 31·6 per cent ; injuries 2 ; tuberculosis 2 (1 pulmonary) ; yellow fever 2, or 10·5 per cent.

(IV) HYGIENE AND SANITATION

Labour conditions.

44. Towards the end of the year it became increasingly evident that the rising cost-of-living called for an adjustment of wages. A temporary cost-of-living bonus was, therefore, sanctioned for labourers in Government employment, which increased the monthly pay of the average labourer from 8s. to 11s.

The temporary cost-of-living bonus is applicable to the Colony, Ashanti and to Tamale in the Northern Territories. An Ordinance to provide for Compensation to Workmen has been enacted and comes into force in 1942.

Medical attendance is provided for, and a scale of percentages of incapacity have been laid down. Much good work has been done by the Department of Labour in the care of derelict labour on the established labour routes. Refuges and labour rest camps have been instituted at strategic points. The starving are fed, and the destitute are assisted to their homes. Kumasi is, and is likely to remain, the clearing-house for labour. The pioneer effort of the Kumasi Public Health Board in establishing a Refuge, now, some years ago, and which has been running successfully ever since, is worthy of wider adoption by other public bodies. No important centre in the Gold Coast should be without a refuge to which the destitute can turn for accommodation, food and rest. Such a refuge is now operating in the town of Accra under the aegis of the Accra Town Council. The Trade Unions Ordinance, 1941 came into operation on the 27th September, 1941.

Housing and Town Planning.

45. Under present conditions housing improvements and town planning schemes have unavoidably been slowed down. Building materials are difficult to obtain ; although there are signs that more and more local sources of building materials will be found. The housing estates, established in the environments of Accra, are proving increasingly popular. Progress in the areas influenced by the mining industry has naturally, also, been interfered with, but it can safely be said that ground has not been lost and that advances previously gained were consolidated.

Sewage Disposal.

46. Little advance can be claimed in methods of sewage disposal. In the larger centres bucket latrines and trenching or final sea disposal are, generally, in vogue. There are signs, however, that septic systems are coming more and more into popularity both in private dwellings and for public service. In the post-war era there is every likelihood that there will be a rapid advance towards a more general adoption of the septic

system. In the rural areas, if latrines are provided, they are of the pit type. Large rural areas, however, are without latrines, or if latrines are provided, these are, usually, very insanitary. Much good work has been carried-out in the Northern Territories, during recent years, in providing septic latrines for rural communities. The digested fluid contents of these septic latrines, in certain centres, are utilized for composting purposes. In several large mining areas incineration of night soil is successfully carried out.

Refuse Disposal.

47. In centres of any size incineration of refuse is the process of choice. In the smaller rural villages dumping is resorted to. Too often such dumping is entirely uncontrolled. It is thought, in the future, that composting of refuse will be more and more resorted to as improved agricultural methods are adopted. The general appearance of uncontrolled privy-middens, however, cannot be contemplated with equanimity.

Water Supplies.

48. Pipe borne water supplies are in operation at Tamale, Kumasi, Sekondi, Takoradi, Elmina, Cape Coast, Saltpond, Winneba and Accra. In certain centres extensions of existing systems have been carried-out, but there were no major works inaugurated. In the Northern Territories the Geological Survey Water Section continued its activities under difficulties. Materials, at present, are difficult to obtain, and any material advance will have to wait for the cessation of the present hostilities. Little new work in the provision of rural water supplies was undertaken during the year in Ashanti and the Colony, but a certain amount of repair work to existing supplies was carried out.

Food in relation to Health and Disease.

49. In all centres of any size established markets exist. These were inspected and controlled by Health Branch, or municipal, officers. Health Branch officers, in those centres where officers of the Department of Animal Health were not stationed, controlled the slaughtering of animals, supervised the local slaughter houses, and were responsible for the inspection of meat previous to sale. In all centres where trained staff is available aerated water factories, restaurants, bakeries and cold storage plants were regularly inspected and the quality of the produce, or food offered for sale, was controlled.

Mosquito Control.

50. Where trained staff and funds were available, every effort was made to extend the areas already under drainage control. During the year 578,505 yards of new earth drains were cut and graded, and 2,679,471 yards of existing earth drains were cleaned and regraded. Not a little advance was made in important areas, and the Takoradi-Sekondi district is now under the control of a composite Malaria Board. All the various methods of drainage are resorted to depending on local conditions and in certain limited areas filling played an important part. The control of the breeding of domestic mosquitoes, as in the past, is an important function of the Health Branch. During the year 3,015,402 house to house inspections were carried-out. In 8,835 instances mosquito larvæ were found, yielding a larval index of 0·29. Control is exerted wherever trained staff is available, but it will be understood that such control cannot embrace the whole country, large rural areas of which are impossible to cover. In such areas the larval index is often very high.

School Hygiene.

51. No true organised school service exists. Local health officers, however, keep in as close touch as possible with the schools in their areas. Such contact was often very close, but the establishment of an organised service is somewhat overdue. There has been considerable modification of the diet in many of the boarding schools following the enquiry into the nutrition of the peoples of the Gold Coast. Local rice has replaced the imported variety, and groundnut biscuit has been popularised. It would appear that there has been some deterioration in the dental condition of school children during the last fifteen years which calls for investigation as soon as staff considerations will permit.

Vaccination.

52. During the year a total of 606,286 vaccinations against small-pox were performed. Of 153,578 cases examined later 89·10 per cent were proved successful. The total vaccinations for the year showed an increase of no less than 270,494 over those of the previous year.

II.—SPECIAL SERVICES

(V) PORT HEALTH AND AIR TRAFFIC

53. No port, or air-port centre, was declared infected during the year. Malaria in seamen has attracted considerable attention, and local authorities have benefited from the visits of the travelling adviser in this important problem. At Takoradi 125 seamen, and at Accra 47, attended the local Venereal Diseases Clinic. The Senior Specialist in charge of the European Hospital, Accra, drew attention to “irregularity and laxity in attendance” at West African ports, and the local shipping agents were asked to circularise the masters of ships in the matter.

During the year it became abundantly evident that, under existing conditions, it was becoming difficult, or impossible, to ensure full anti-amaryl precautions at the air-ports. Certificates of non-exposure to infection will, therefore, be discontinued; and additional stress laid on the disinsectisation of aircraft and the protection of air passengers by inoculation.

(VI) MATERNITY AND CHILD WELFARE

54. The work done during the year under review has resulted in considerable increases in the attendances of expectant mothers and children.

The following table illustrates the amount of work carried-out during the year at the various welfare centres :—

TABLE IV

TYPE OF CENTRE	ATTENDANCES	
	Children	Expectant mothers
Government Centres 	39,735	13,907
Red Cross Centres 	35,936	28 ,012
Mission Centres	63,398	1,164
Total	139,069	43,083

In 1940 the total attendances of children and expectant mothers were 105,797 and 40,823 respectively. The popularity of the district weighing centres at Accra and Kumasi continues to grow. During the year the total number of attendances was 87,184, compared with 74,965 in 1940. Pregnancy, childbirth, the puerperal state and maternal welfare (ante-natal) accounted for the attendance of 42,484 persons at Government hospitals and dispensaries, compared with a total of 29,369 for the previous year. The total number of in-patients admitted to the Maternity Hospital, Accra, was 2,169, compared with a total of 2,127 in 1940. Of this number 377 were admitted for ante-natal treatment. Twenty-one thousand one hundred and sixty-three ante-natal cases attended as out-patients at the Maternity Hospital and the ancillary Clinics in the Accra area.

(VII) HOSPITALS, DISPENSARIES, LABORATORIES, ETC.

55. Of the 39 Government Hospitals in the Gold Coast and in Togoland under British Mandate six are for the reception of European cases and 33 for African cases. The African Hospitals accommodate 1,225 beds and 154 cots, and the European Hospitals 107 beds.

56. Return A of this report shows the diseases, treated in all the Government Hospitals and Dispensaries, grouped under 65 heads. The total number of in-patients treated i.e., 32,408 yields an increase of 4,332 cases over the total for 1940. The Hospitals chiefly responsible for this increase are—Kumasi African Hospital (1,573) ; Tamale African Hospital (793) ; Takoradi European Hospital (634) ; Sekondi African Hospital (359) Koforidua African Hospital (306) ; Gold Coast Hospital, Accra (175) ; Hohoe African Hospital (167) ; Kumasi Welfare Clinic (134) ; Colonial Asylum (123) ; Keta African Hospital (120), etc.

The total number of out-patients treated, i.e., 363,128, shows an increase of 48,011 over the total number of out-patients treated in 1940. The Hospitals chiefly responsible for this increase are—Obuasi (Ashanti Goldfields Corporation) African Hospital (29,355) ; Kumasi African Hospital (5,221) ; Takoradi African Dispensary (4,384) ; Yendi African Hospital (4,218) ; Bawku African Hospital (3,677) ; Sekondi African Hospital (2,495) ; Kumasi Welfare Clinic (2,366) ; Accra European Hospital (1,653) ; and European Hospital Takoradi (406), etc. The large increase in the Obuasi figures is, probably, in part due to the linking up of Obuasi with the main road system of the country. The number of deaths of in-patients rose from 1,843 in 1940 to 2,356 in the year under review, but the percentages of deaths to the total number of in-patients treated are very comparable, i.e., 6·6 in 1940, and 7·3 in 1941.

57. There are 33 Village Dispensaries dispersed throughout the Gold Coast in isolated rural areas. Eleven of these are situated in the Colony, five in Ashanti and eighteen in the Northern Territories. Trained dispensers are in charge of these dispensaries, and their work is supervised by the medical officer in charge of the district. Some 62,872 persons attended these dispensaries as out-patients during the year.

58. The laboratories of the Medical Research Institute Accra, carried-out 35,808 bacteriological, pathological and chemical examinations on material forwarded from all parts of the country, compared with 33,138 examinations in 1940. Post-mortem examinations to a total of 211 were carried-out, compared with 229 in 1940.

59. The Chemical Laboratory made 835 examinations for the Medical Department, the Coroner, H.M. Customs, the Police and other Departments. The total of such examinations carried-out in 1940 was 906. In addition to this work, the Laboratory collaborated closely with the Prisons Department with a view to the better curing and preserving of local fish and, in the earlier part of the year, with the Medical Officer in charge of Nutrition, Field Survey.

Dental Clinic.

60. The Government Dental Surgeon was on duty up to the 30th September, 1941, when he proceeded on leave. Some 3,681 cases, both Government officials and non-officials, were treated during the year, compared with a total of 5,709 in 1940. Dental operations to a total of 6,396 were performed.

(VIII)—TRAINING OF MEDICAL AND HEALTH PERSONNEL

61. As in previous years, the training of junior staff was undertaken at all the principal hospitals. One Gold Coast Certificate of Nursing was granted during the year.

62. In the examination for the Pharmaceutical Diploma, for which no Government trained candidates sat, all seven candidates failed. The Cambridge Leaving Certificate is required before entry into the Government Dispensing School, but evidently no standard of previous education is demanded by other training bodies, or under the Ordinance. As a result pupils are taken into training and, in due course, entered for the examination, but owing to lack of general education, are foredoomed to failure. The necessity for laying down a standard of education for the future, and insisting that a pupil, when taken into training by a private body, shall be registered, is under consideration.

63. As previously, the training of pupil-midwives was undertaken at the Maternity Hospital, Accra. At the end of the year 40 pupils were in training. During the year ten candidates passed the examination of the Midwives' Board and became registered midwives.

64. The School for Sanitary Inspectors-in-training at Accra, owing to staff shortage and the non-filling of the post held in abeyance since the retirement of the previous Training Officer, did not operate, but regular courses of instruction were maintained by the Sanitary Superintendent.
65. Sanitary overseers for the Native Administrations in the Northern Territories continued to be trained by the Health Branch staff at Tamale. Twelve pupils completed the course in 1941.
66. Health Visitors are trained at the Princess Marie Louise Welfare Centre, Accra ; and two candidates obtained the Health Visitors' Certificate during the year.

III.—FINANCE

67. The following table shows ordinary recurrent expenditure for the Medical Department (General, Health and Research Branches) for the first ten months of the year, 1941—

Branch					Actual Expenditure 1/1/41 to 31/10/41
					£
Medical	...	...	...	...	171,921
Health	...	...	...	...	122,482
Research	...	...	...	...	4,438
Total					298,841
Total Colony					2,414,438
Percentage of total to Colony total for period 1/1/41 to 31/10/41					12·4

68. The expenditure on medical services shown above does not include the cost of buildings, water supplies, town improvements and other public works of health importance.

J. BALFOUR KIRK
Director of Medical Services.

RETURN A
RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS)
FOR THE YEAR 1941

DISEASES	IN-PATIENTS						OUT-PATIENTS	
	Remaining in hospital on 31st Dec., 1940	Admis- sions	Yearly Total		Total cases treated	Remaining in hospital on 31st Dec., 1941	Males	Females
			Males	Females				
1. (a) Typhoid fever	7	123	16	7	130	8	26	6
(b) Paratyphoid	—	4	1	—	4	—	—	—
(c) Type not defined	2	20	1	2	22	1	9	8
2. Typhus fever	—	—	—	—	—	—	—	—
3. Relapsing fever	—	—	—	—	—	—	—	—
4. Undulant fever	—	—	—	—	—	—	—	—
5. Small-pox	—	107	16	12	107	—	80	64
6. Measles	1	21	—	—	22	1	140	87
7. Scarlet fever	—	—	—	—	—	—	—	—
8. Whooping cough	—	11	—	—	11	1	423	463
9. Diphtheria	—	2	—	—	2	—	6	—
10. Influenza :—								
(a) with respiratory complications	—	—	—	—	—	—	—	—
(b) without respiratory complications	2	99	—	—	101	—	188	45
11. Cholera	—	—	—	—	—	—	—	—
12. Dysentery :—								
(a) Amoebic	7	229	16	6	236	2	346	211
(b) Bacillary	1	107	8	2	108	2	127	49
(c) Unclassified	—	57	10	2	57	1	307	154
13. Plague :—								
(a) Bubonic	—	—	—	—	—	—	—	—
(b) Pneumonic	—	—	—	—	—	—	—	—
(c) Septicæmic	—	—	—	—	—	—	—	—
14. Acute poliomyelitis	—	2	—	1	2	1	7	2
15. Encephalitis lethargica	—	2	—	1	2	—	3	1
16. Cerebrospinal fever	1	25	6	5	26	1	2	—
17. Rabies	—	6	2	1	6	—	3	—
18. Tetanus	1	61	16	9	62	1	101	26
19. Tuberculosis of the respiratory system	59	570	260	25	629	48	1,010	175
20. Other tuberculous diseases	12	125	14	4	137	23	108	34
21. Leprosy	503	184	32	11	687	479	328	161
22. Venereal Diseases :—								
(a) Syphilis	15	96	15	4	111	9	462	197
(b) Gonorrhoea and complications	27	1,208	17	2	1,235	31	5,209	887
(c) Other V.D.	8	131	—	—	139	8	259	37

RETURN A—contd.
RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS)
FOR THE YEAR 1941—contd.

DISEASES	IN-PATIENTS						OUT-PATIENTS	
	Remaining in hospital on 31st Dec., 1940	Admis- sions	Yearly Total		Total cases treated	Remaining in hospital on 31st Dec., 1941	Males	Females
			Males	Females				
23. Yellow fever	—	4	4	—	4	—	—	—
24. Malaria :—								
(a) Benign tertian	6	171	2	—	177	—	96	73
(b) Subtertian	39	2,093	34	22	2,132	38	10,946	6,812
(c) Quartan	—	12	1	—	12	—	22	16
(d) Unclassified	10	1,330	13	10	1,340	11	10,770	5,813
25. Blackwater fever	—	42	5	3	42	2	21	17
26. Kala-azar	—	—	—	—	—	—	—	—
27. Trypanosomiasis	319	1,371	124	48	1,690	265	1,802	830
28. Yaws	11	270	5	2	281	20	47,584	30,954
29. Other protozoal diseases	—	—	—	—	—	—	—	—
30. Ankylostomiasis	9	268	13	3	277	5	456	190
31. Schistosomiasis	5	166	3	3	171	7	678	153
32. Other helminthic diseases	9	584	2	1	593	19	3,254	1,763
33. Other infectious and/or parasitic diseases	14	363	26	4	377	15	542	169
34. Cancer and other tumours :—								
(a) Malignant	2	43	9	3	45	—	17	26
(b) Non-malignant	14	215	1	8	229	14	241	391
(c) Undetermined	—	—	—	—	—	—	—	—
35. Rheumatic conditions	2	117	—	—	119	4	3,657	2,488
36. Diabetes	3	20	1	3	23	—	24	6
37. Scurvy	—	2	—	—	2	—	12	3
38. Beriberi	1	10	1	—	11	—	8	1
39. Pellagra	—	7	4	2	7	2	17	7
40. Other diseases :—								
(a) Nutritional	1	72	7	1	73	5	220	129
(b) Endocrine glands and general	—	21	—	—	21	3	71	11
41. Diseases of the blood and blood-forming organs	4	186	16	9	190	14	695	788
42. Acute and chronic poisoning	1	32	—	—	33	—	17	4
43. Cerebral hæmorrhage	2	47	22	5	49	2	9	4
44. Other diseases of the nervous system	591	485	66	18	1,076	595	742	299
45. Trachoma	—	7	—	—	7	1	39	26
46. Other diseases of the eye and annexa	21	635	1	—	656	21	7,009	5,625
47. Diseases of the ear and mastoid sinus	4	186	1	—	190	4	2,517	1,367
48. Diseases of the circulatory system :—								
(a) Heart diseases	11	244	57	19	255	14	399	153
(b) Other circulatory diseases	20	547	17	1	567	21	1,521	370
49. Bronchitis	10	444	8	2	454	3	8,218	5,326
50. Pneumonia :—								
(a) Broncho-pneumonia	5	193	37	17	198	3	184	162
(b) Lobar-pneumonia	24	513	38	20	537	19	284	79
(c) Otherwise defined	1	105	15	1	106	6	183	57
51. Other diseases of the respiratory system	10	383	16	1	393	12	3,613	1,814
52. Diarrhoea and enteritis :—								
(a) Under 2 years of age	3	71	7	9	74	9	1,426	1,143
(b) Over 2 years of age	2	414	12	5	416	2	1,704	984
53. Appendicitis	4	88	3	1	92	4	42	26
54. Hernia, intestinal obstruction	28	531	22	2	559	30	805	19
55. Cirrhosis of the liver	1	31	10	—	32	1	22	5
56. Other diseases of the liver and biliary passages	4	199	23	4	203	11	248	114
57. Other diseases of the digestive system	36	1,084	46	22	1,120	34	16,812	8,738
58. Nephritis (all forms) :—								
(a) Acute	4	78	7	4	82	3	106	80
(b) Chronic	13	129	43	11	142	8	155	92
59. Other non-venereal diseases of the genito- urinary system	53	1,211	31	6	1,264	44	2,596	3,630
60. Pregnancy, child-birth, and the puerperal state including normal labour and maternal welfare (ante-natal)	58	2,007	—	121	2,065	55	—	42,484
(a) Abortion	5	315	—	3	320	6	—	325
(b) Ectopic gestation	4	37	—	4	41	1	—	8
(c) Toxæmias of pregnancy	—	15	—	7	15	—	—	3
(d) Other conditions of the puerperal state	2	50	—	8	52	—	—	25
61. Diseases of the skin, cellular tissue, bones and organs of locomotion	241	3,756	90	18	3,997	240	38,235	18,196
62. Congenital malformations and diseases of early infancy	24	879	103	83	903	28	227	188
(a) Congenital debility (children under 1 year)	6	105	4	4	111	11	283	304
(b) Premature birth (children under 1 year)	4	135	50	43	139	6	57	85
(c) Injury at birth (children under 1 year)	6	51	12	8	57	5	482	459
63. Senility	17	16	4	1	33	28	82	52
64. External causes :—								
(a) Suicide	1	7	7	1	8	—	3	—
(b) Other forms of violence	146	3,321	137	29	3,467	132	26,457	2,604
65. Ill-defined	31	1,012	57	15	1,043	58	4,815	5,363
Total Causes	2,488	29,920	1,647	709	32,408	2,463	209,569	153,559

